

CLAIMS

1. Manufacturing method of a tubular can comprising an interior sleeve (21) made of a tight, fragile and flexible material and an external body made of cardboard (6), closed at both ends by two closures (23, 28), the external body being provided, between the two closures, with a precut weakness (26) located in a transverse plan to the tube axis to facilitate the opening of the can, characterized by the following steps:

the interior sleeve (21) is formed by sealing the two longitudinal ends of a material coming out from a reel (1) and passing through a forming device (3) ensuring the tubular formation of the sleeve,

a cardboard (6) which width corresponds to the periphery of can and which length corresponds to the height or a multiple integer of the can height is being adhered on the sleeve (21),

the one tube or the tubes (14) obtained is or are cut out;

one of the ends of the can is closed in a hermetic way;

the can is filled with the product to be packed and the other end is also closed in a hermetic way.

2. Method according to claim 1, characterized in that a flange (24) made of a flexible material is sealed or glued inside the tube and on the part corresponding to the precut weakness (26) of the external body.

3. Method according to claim 1, characterized in that the operations for the formation of the can are performed in a continuous and synchronized operation, until the individual tubes (14) are cut out.

4. Installation for the implementation of the method according to claim 1, which comprises a forming mandrel (4) which cross section corresponds to the shape of the tube to be formed, a forming device (3) placed around the mandrel (4) to form the sleeve (21) coming out from the reel (1), means for advancement (11) of the sleeve, means for sealing (7, 8, 9, 10) two longitudinal ends of the sleeve (21), a sheet feeding device (6) for the formation of the external body, means (7, 7', 7'') for applying adhesive to the inner face of the aforesaid sheet (6), means (15, 16, 17, 18) for applying the aforementioned sheet (6) against the sleeve (21), means for the advancement (11) of the formed tube, means for cutting (12, 13) into individual cans, means for closing one end of the can and for closing the second end after filling the can.

5. Installation according to claim 4, characterized in that the means for applying the aforementioned sheet against the sleeve comprise a first hollow cylinder (9) provided along two generating lines with a series of radial holes (10) communicating with two individual vacuum chambers, the peripheral distance between two generating lines corresponding at least approximately to the width of the sheets (6), the aforementioned hollow cylinder (9) being carried on a device (15, 16, 17, 18) allowing, on one hand, to apply it against the mandrel (4) and, on the other hand, to make it roll on and around the aforementioned mandrel with the sleeve (21).

6. Installation according to claim 5, characterized in that the means allowing the application of the aforementioned cylinder (9) to the mandrel (4) and to make it roll comprises two rotating plates (15), concentric with mandrel (4), and

which support through a system (17) to copy the shape of the tube to be formed, bearings (16) supporting the aforementioned hollow cylinder (9).

7. Installation according to claim 6, characterized in that the aforementioned copying device is made up for each plate (15) of two cylinders (17) allowing to move the aforementioned cylinder (9) towards or away from the mandrel (4) and to hold it against the side surface of the mandrel to allow it to roll on and around the mandrel.

8. Installation according to one of claims 4 to 7, characterized in that all the means of the installation or packing machine are synchronized to allow them to work in a continuous operation, the sheet feeding device, the device for applying glue, and the device for applying the sheet against the mandrel and the means for cutting out into individual tubes are mounted on carriages provided with means allowing them to be moved between predetermined positions forwards and backwards.

9. Installation according to one of claims 4 to 8, characterized in that the arrangement of the forming device (3) and the device (15, 16, 17, 18) allowing to apply the cylinder (9) against the mandrel (4) is so arranged that the joints obtained along the sleeve (21) and that of the external body are opposed by approximately 180°.

10. Installation according to one of claims 4 to 9, characterized in that it comprises a device to work and seal or glue a flange (24) inside the tube.

ABSTRACT

The invention concerns a method and an installation for making a tubular package comprising a flexible, fragile and sealed inner sleeve and an outer cardboard body provided with a precut and closed at both ends by two seals. The method for forming the sleeve consists in sealing the two longitudinal ends of the material (1) exiting from the bobbin (1) and passing through a shaping unit (3) enclosing a mandrel (4); glueing on the sleeve a cardboard (6) with a satellite device (9); cutting out the tube(s) obtained with a device (12, 13) and sealing one of the ends of the package; filling the package with the product to be packaged and sealing the other end. The resulting package is perfectly sealed and can be opened by pressing on the cardboard proximate the precut of the tube thereby rupturing the sleeve and opening the package. Such type of package is designed for packaging oblong products.